

CLAIMS

What is claimed is:

- 1 1. A method comprising:
2 receiving an application program;
3 compiling the application program into a first compiled version for execution by a
4 first processor;
5 executing the first compiled version using the first processor;
6 capturing profile data during the execution of the first compiled version; and
7 compiling the application program into a second compiled version for execution
8 by a second processor, the compiling of the second compiled version
9 including optimization based at least in part on the captured profile data.
- 1 2. The method of claim 1, further comprising storing the profile data in a memory.
- 1 3. The method of claim 1, further comprising executing the second compiled version
2 using the second processor.
- 1 4. The method of claim 1, wherein the first compiled version is instrumented with
2 monitoring instructions to direct the capture of profile data.
- 1 5. The method of claim 1, wherein the second processor is an embedded processor.
- 1 6. The method of claim 5, wherein the second processor is not capable of capturing
2 profile data.

1 7. The method of claim 5, wherein the second processor is not capable of generating
2 external communications.

1 8. The method of claim 1, wherein the first processor is a host processor for a device
2 and wherein the device includes the second processor.

1 9. The method of claim 1, wherein compiling the application program into a first
2 compiled version utilizes a first compiler and wherein compiling the application
3 program into a second compiled version utilizes a second compiler.

1 10. The method of claim 1, wherein compiling the application program into a first
2 compiled version and compiling the application program into a second compiled
3 version are performed with a single compiler.

1 11. A machine-readable medium having stored thereon data representing instructions
2 that, when executed by a processor, cause the processor to perform operations
3 comprising:
4 receiving an application program;
5 compiling the application program into a first compiled version for execution by a
6 first processor;
7 executing the first compiled version using the first processor;
8 capturing profile data during the execution of the first compiled version; and
9 compiling the application program into a second compiled version for execution
10 by a second processor, the compiling of the second compiled version
11 including optimization based at least in part on the captured profile data.

1 12. The medium of claim 11, wherein the instructions include instructions that, when
2 executed by a processor, cause the processor to perform operations comprising
3 storing the profile data in a memory.

1 13. The medium of claim 11, wherein the instructions include instructions that, when
2 executed by a processor, cause the processor to perform operations comprising
3 executing the second compiled version using the second processor.

1 14. The medium of claim 11, wherein the first compiled version is instrumented with
2 monitoring instructions to direct the capture of profile data.

1 15. The medium of claim 11, wherein the second processor is an embedded processor.

1 16. The medium of claim 15, wherein the second processor is not capable of
2 capturing profile data.

1 17. The medium of claim 15, wherein the second processor is not capable of
2 generating external communications.

1 18. The medium of claim 11, wherein the first processor is a host processor for a
2 device and wherein the device includes the second processor.

1 19. The medium of claim 11, wherein compiling the application program into a first
2 compiled version utilizes a first compiler and wherein compiling the application
3 program into a second compiled version utilizes a second compiler.

1 20. The medium of claim 11, wherein compiling the application program into a first
2 compiled version and compiling the application program into a second compiled
3 version are performed with a single compiler.

1 21. A system comprising:
2 one or more memories, data being stored within the one or memories including a
3 first compiler and a second compiler, the first compiler compiling an
4 application program into a first compiled version;
5 a host microprocessor, the host microprocessor executing the first compiled
6 version, the host microprocessor capturing profile data during the
7 execution of the first compiled version; and
8 a target processor, the second compiler compiling the application code into a
9 second compiled version for execution by the target processor, the second
10 compiled version being optimized based at least in part on the captured
11 profile data.

1 22. The system of claim 21, wherein the captured profile data is stored in the one or
2 more memories.

1 23. The system of claim 21, wherein the target microprocessor is an embedded
2 microprocessor.

1 24. The system of claim 23, wherein the target microprocessor does not have the
2 capability of capturing a profile data.

1 25. The system of claim 23, wherein the target microprocessor does not have the
2 capability of generating external communications.

1 26. A method of optimizing the execution of a program by an embedded processor
2 comprising:
3 obtaining the program;
4 compiling the program to generate a first set of compiled code, the first set of
5 compiled code being instrumented to monitor the execution of the first set
6 of compiled code;
7 executing the first set of compiled code on a host processor, the host processor
8 being contained in a device that also contains the embedded processor;
9 capturing profile information during the execution of the first set of compiled
10 code and saving the profile information in a memory;
11 compiling the program to generate a second set of compiled code, the second set
12 of compiled code being optimized based at least in part on the captured
13 profile information; and
14 executing the second set of compiled code using the embedded processor.

1 27. The method of claim 26, wherein the first set of compiled code is compiled
2 utilizing a first compiler and the second set of compiled code is compiled utilizing
3 a second compiler.

1 28. The method of claim 26, wherein the first set of compiled code and the second set
2 of compiled code are compiled utilizing a single compiler.